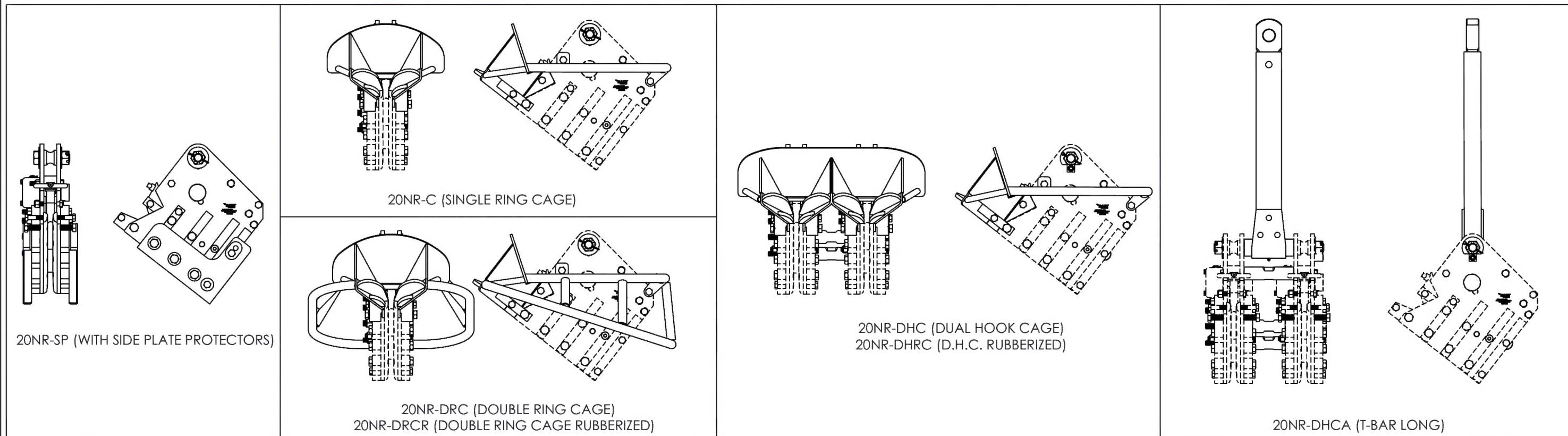


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SEE ATTACHED DEVIATION

		REVISIONS		
REV	ECR	DESCRIPTION	DATE	INITIAL
1		REMOVED 20NR FROM ASSY'S 20NR-C, 20NR-DRC, 20NR-DRCR, 20NR-DHC, 20NR-DHRC, & 20NR-DHCA. REMOVED 20NR-83 FROM ASSY'S 20NR-DHC, & 20NR-DHRC.	7/22/2014	JAG
2	15-0239	20NR-75 REPLACED W/ AN8-34A.	9/25/2015	DPD



ASSY QTY	ASSY QTY	B/O	Part #	20NR-DHCA /QTY.	20NR-DHRC /QTY.	20NR-DHC /QTY.	20NR-DRCR /QTY.	20NR-DRC /QTY.	20NR-C /QTY.	20NR-SP /QTY.	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			20NR							1	20NR NUBBINS RECEIVER			2
			20NR-78							1	RH PROTECTOR PLATE ASSY			2
			20NR-80							1	LH PROTECTOR PLATE ASSY			2
			20NR-83A	1							T-BAR LONG			8
			20NR-84	1	1	1					SPACER DUAL CAGE 6, 1/2" HOLE	1045		6.7.8
			20NR-84A	1	1	1					SPACER DUAL CAGE 4, 1/2" HOLE	1045		6.7.8
			20NR-84B	1	1	1					SPACER DUAL CAGE 4, 5/8" HOLE	1045		6.7.8
			20NR-85	1	1	1					DRAW BAR FOR T-BAR	4340		6.7.8
			20NR-86			1					DUAL HOOK CAGE			6
			20NR-86R		1						DUAL HOOK RUBBERIZED CAGE			7
			20NR-88				1				DOUBLE RING CAGE			4
			20NR-88R				1				DOUBLE RING CAGE RUBBERIZED			5
			20NR-93	1	1	1					STOP BLOCK	A36		6.7.8
			20NR-119					1			20NR SINGLE RING CAGE			3
B/O	20NR-07	2	2	2	1	1	1	1			LIFTING BOLT NUT	STEEL	1"-8, GRADE 5 (MCMASTER-CARR #97190A040)	2-8
	20NR-07A				1	1	1	1			LIFTING BOLT	STEEL	1"-8 X 5-1/2, GRADE 8 (MCMASTER-CARR #91257A967) MODIFIED	2,3,4,5
B/O	20NR-12	12	12	12	6	6	6	6			RAIL BOLTS	STEEL	5/8-18 X 1-3/4 MCMASTER-CARR #92620A310	3-8
B/O	20NR-45	2	2	2	3	3	3	3			NYLOCK NUT	STEEL	1/2-20 (MCMASTER-CARR #97135A255)	2-8
B/O	20NR-46				1	1	1	1			5/8 NUT	STEEL	5/8-18 (MCMASTER-CARR #97135A275)	2,3,4,5
B/O	20NR-48	4	4	4	2	2	2	2			RAIL BOLTS	STEEL	1/2-20 X 1-3/4 MCMASTER-CARR #92620A747	3-8
B/O	20NR-85B	1	1	1	2	2	2	2			LIFTING BOLT WASHER	STEEL	Ø1-1/16 I.D. (MCMASTER-CARR #90108A038)	2-8
	20NR-85C	1	1	1							LIFTING WASHER WITH FLAT	STEEL	Ø1-1/16 I.D. MCMASTER-CARR #90108A038 (MODIFIED)	6.7.8
B/O	20NR-89	2	2	2	1	1	1	1			COTTER PIN	STEEL	Ø1/8 X 2 (MCMASTER-CARR #98338A200)	2-8
B/O	20NR-94	1	1	1							3/8 WEDGE LOCK WASHER SET	STEEL	Ø3/8 MCMASTER-CARR #91074A131	6.7.8
B/O	20NR-95	1	1	1							3/8 FINE THREAD BOLT	STEEL	3/8-24 X 1 MCMASTER-CARR #90128A364	6.7.8
B/O	20NR-105							2			SIDE PLATE BOLTS	STEEL	1/2-20 X 2 MCMASTER-CARR #91257A748	2
B/O	20NR-116	2	2	2							DOWEL PIN	STEEL	Ø1/8 X 5/8 MCMASTER-CARR #98381A472	6.7.8
B/O	AN8-34A	4	4	4	2	2	2	2			CAGE BOLT	STEEL	1/2-20 X 3.594	2-8
B/O	20NR-79							6			SIDE PLATE BOLT	STEEL	5/8-18 X 2 MCMASTER-CARR #92620A825	

DART AEROSPACE

20NR CAGE ASSEMBLIES

20NR-CAGES

MAT'L DRAWN BY: SMITH

UNLESS OTHERWISE SPECIFIED APPROVED *D. Weil*

DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8

.XX ± .01 ANGLES ± 5°

.X ± .1 TREAT FINISH

1. BREAK ALL SHARP EDGES .015 X 45° OR .015R SPEC

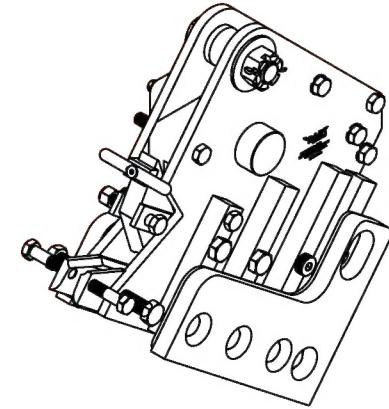
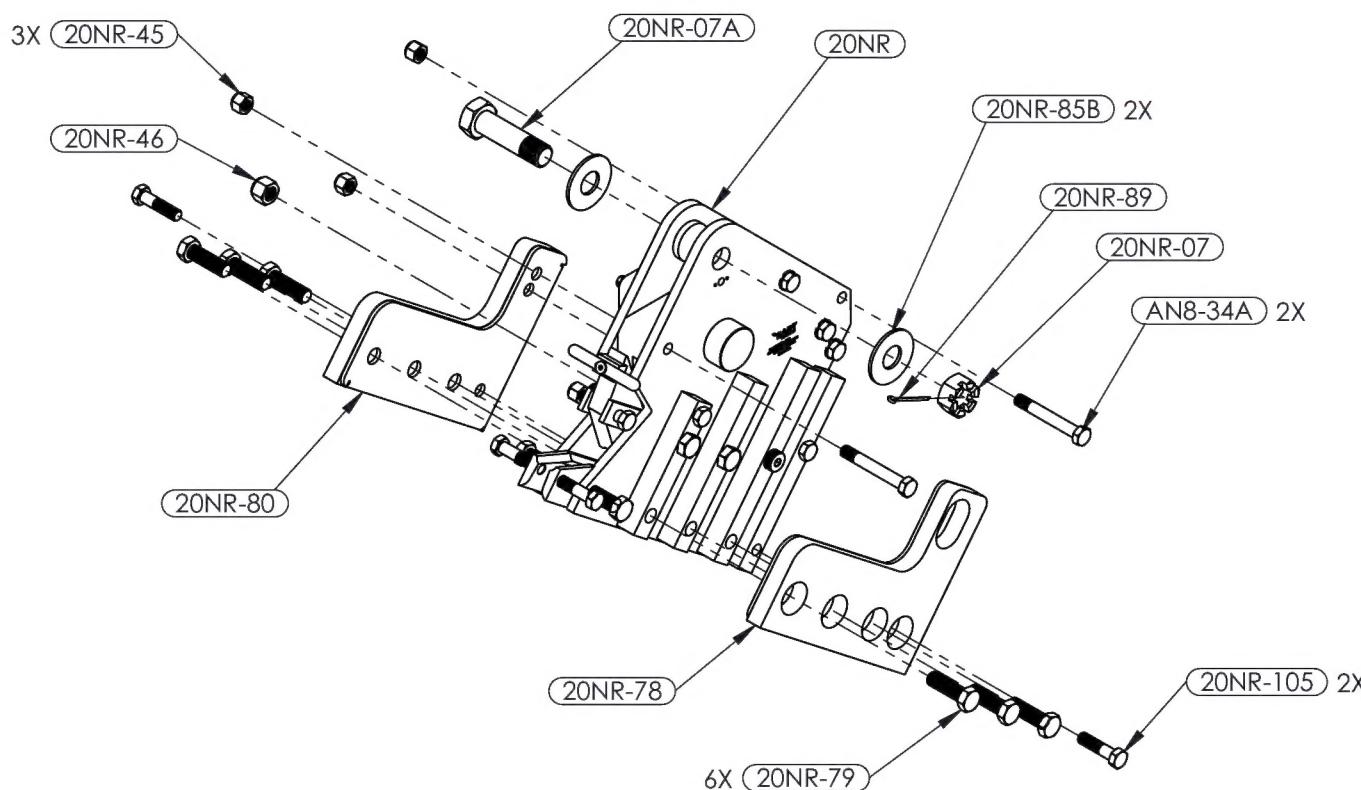
2. DIMENSIONAL LIMITS APPLY AFTER PLATING USED ON MODEL

SCALE 1:12 DATE 8/16/2013 SHEET 1 OF 8

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REV	ECR	REVISIONS	DESCRIPTION	DATE	INITIAL	APPROVED
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SEE ATTACHED DEVIATION



20NR-SP

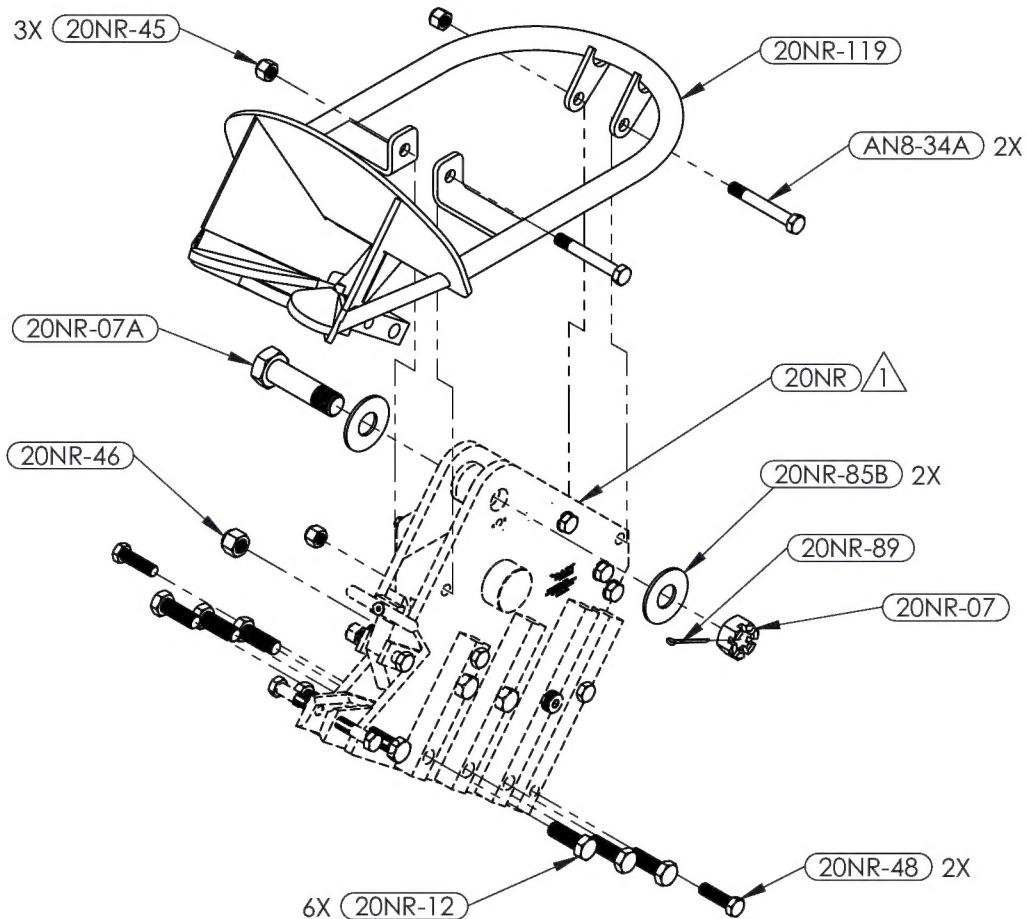
WITH SIDE PLATE PROTECTORS

DART AEROSPACE	
TITLE	20NR CAGE ASSEMBLIES
DWG NO.	20NR-CAGES
MAT'L	DRAWN BY: SMITH APPROVED <i>D Weil</i>
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	REV 2 HEAT TREAT FINISH SPEC USED ON MODEL
SCALE 1:8	DATE 8/16/2013
	SHEET 2 OF 8

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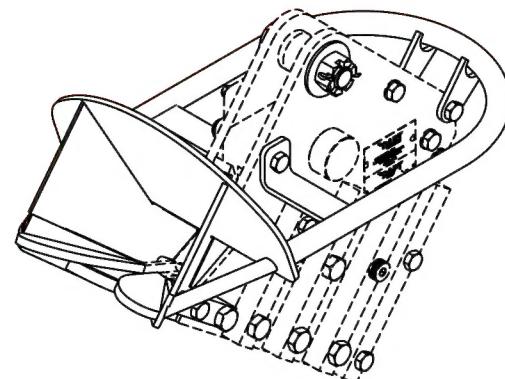
REV			ECR			DESCRIPTION			REVISIONS		
1									DATE	INITIAL	APPROVED
									7/22/2014	JAG	EB

SEE ATTACHED DEVIATION



(20NR-C)

SINGLE RING CAGE



NOTE:

△ 20NR FOR REFERENCE ONLY.

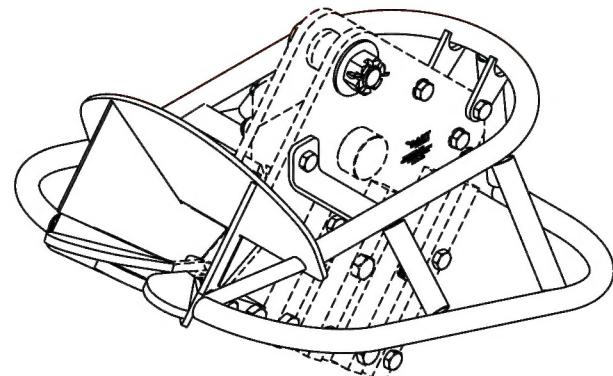
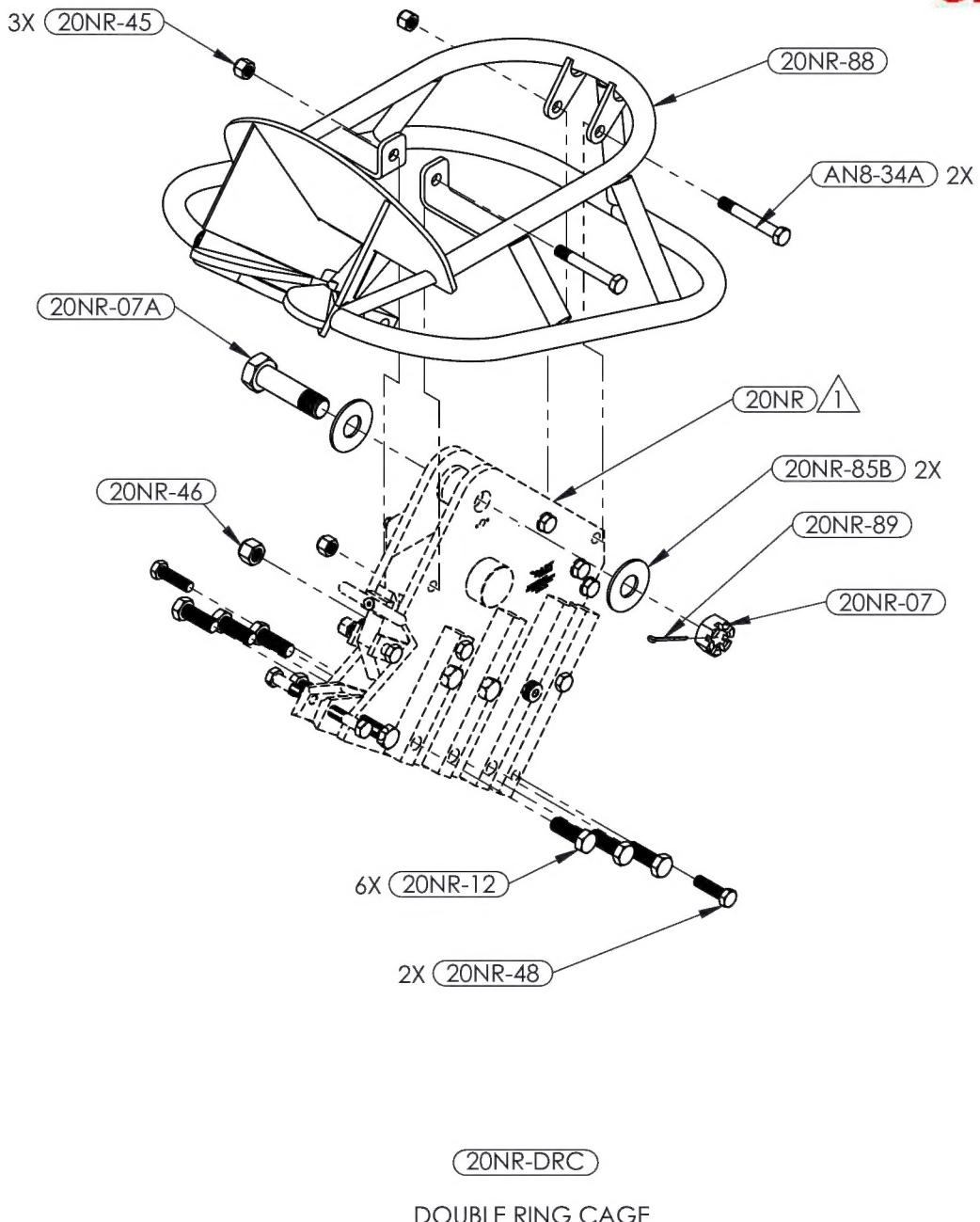
DART
AEROSPACE

TITLE		REV
DWG NO.		2
MAT'L		DRAWN BY:
20NR-CAGES		SMITH
APPROVED <i>D Weil</i>		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
.XXX ± .005 FRACTIONS ± 1/8		
.XX ± .01 ANGLES ± 5°		
.X ± .1		
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R		
2. DIMENSIONAL LIMITS APPLY AFTER PLATING		
USED ON MODEL		
SCALE	1:8	DATE 8/16/2013
		SHEET 3 OF 8

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REV			ECR			DESCRIPTION			DATE			INITIAL			APPROVED		
1			20NR CHANGED TO A REFERENCE, REMOVED SIDE PROTECTORS.						7/22/2014			JAG			EB		

SEE ATTACHED DEVIATION



NOTE:

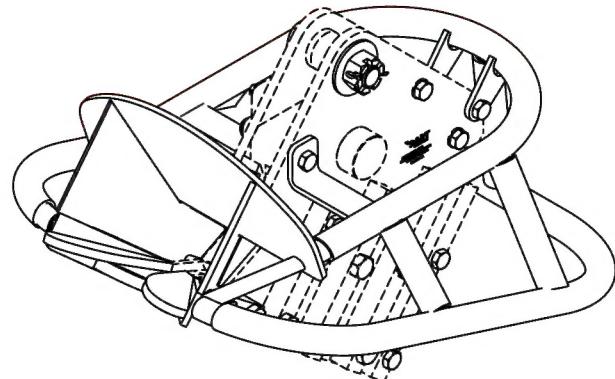
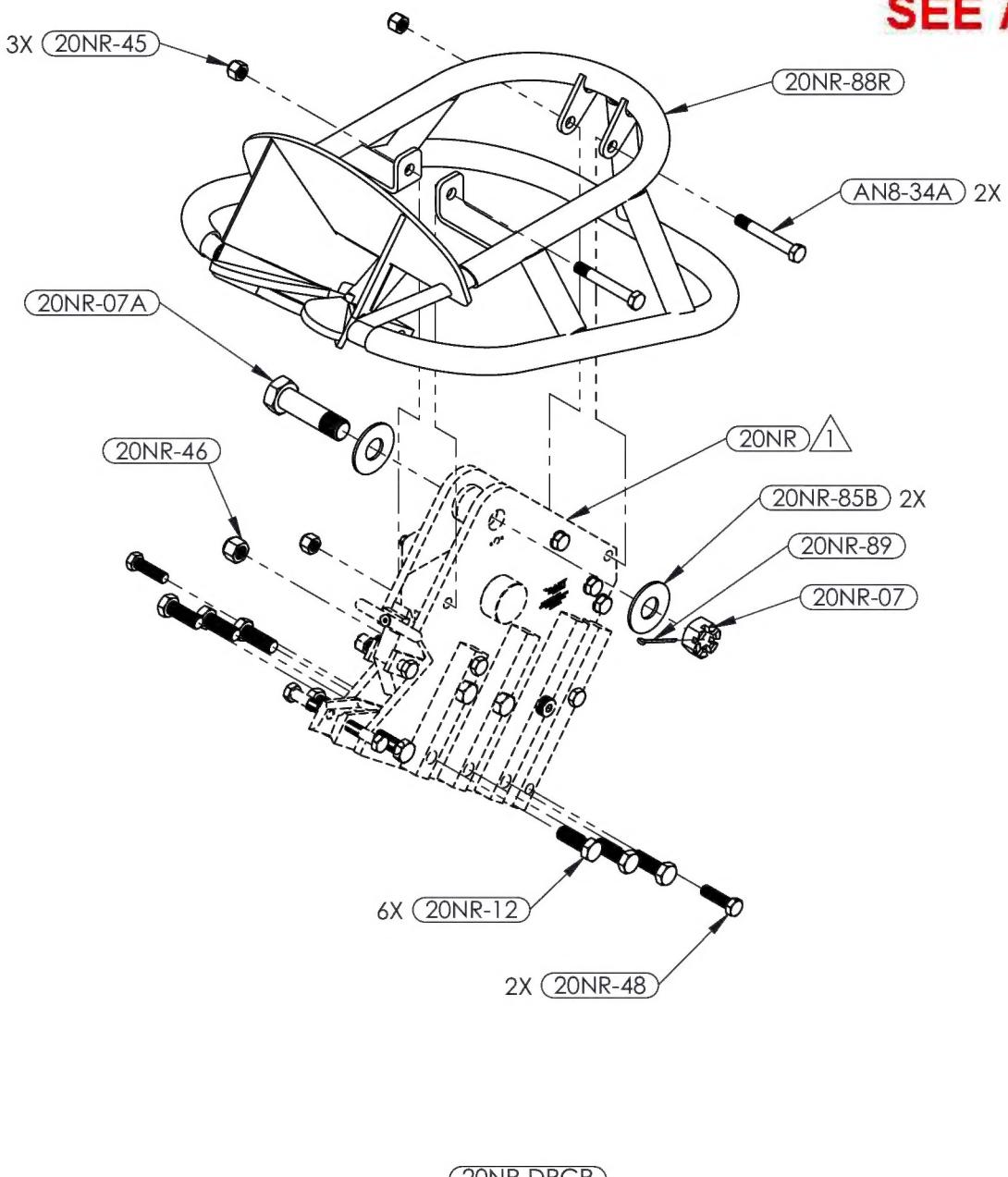
1 20NR FOR REFERENCE ONLY.

		
TITLE 20NR CAGE ASSEMBLIES		
DWG NO.	20NR-CAGES	REV 2
MAT'L	DRAWN BY: SMITH	APPROVED <i>D Weil</i>
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		
HEAT TREAT FINISH SPEC USED ON MODEL		
SCALE	1:8	DATE 8/16/2013
SHEET 4 OF 8		

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REV			ECR			DESCRIPTION			DATE			INITIAL			APPROVED		
1			20NR CHANGED TO A REFERENCE, REMOVED SIDE PROTECTORS.						7/22/2014			JAG			EB		

SEE ATTACHED DEVIATION



NOTE:

△ 20NR FOR REFERENCE ONLY.

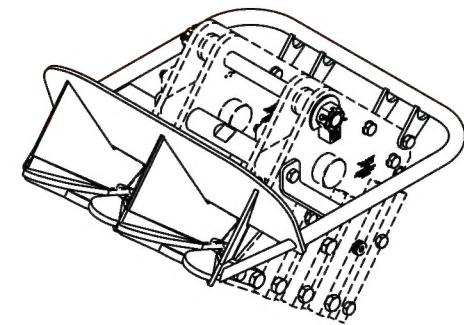
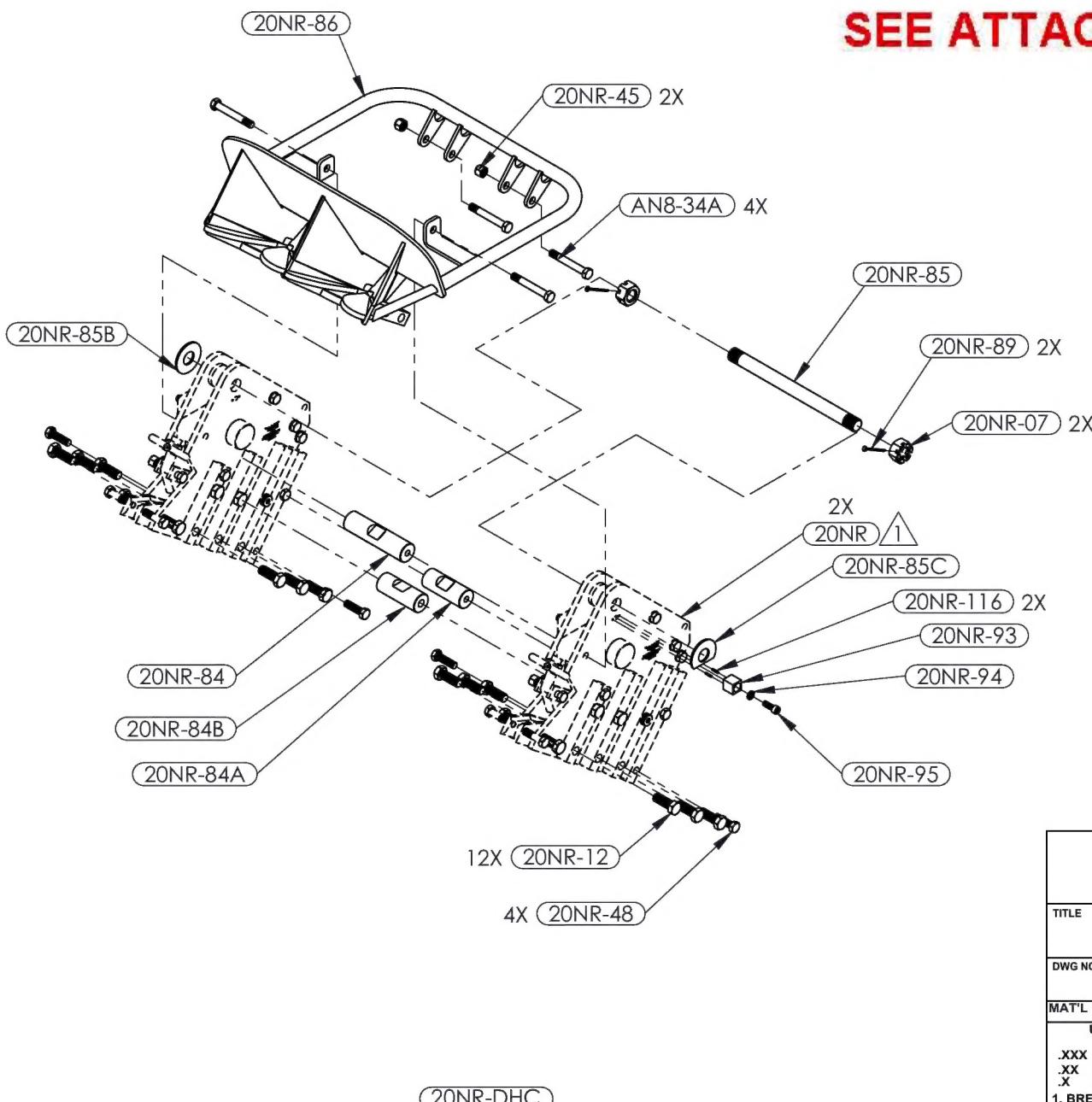
DOUBLE RING CAGE RUBBERIZED

DART AEROSPACE		
TITLE		
20NR CAGE ASSEMBLIES		
DWG NO.	20NR-CAGES	REV 2
MAT'L	DRAWN BY: SMITH	APPROVED D Weil
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
.XXX ± .005 FRACTIONS ± 1/8		
.XX ± .01 ANGLES ± 5°		
.X ± .1		
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R		
2. DIMENSIONAL LIMITS APPLY AFTER PLATING		
USED ON MODEL		
SCALE	1:8	DATE 8/16/2013
SHEET 5 OF 8		

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REV			ECR			DESCRIPTION			DATE			INITIAL			APPROVED		
1			20NR CHANGED TO A REFERENCE, REMOVED T-BAR & SIDE PROTECTORS.						7/22/2014			JAG			EB		

SEE ATTACHED DEVIATION



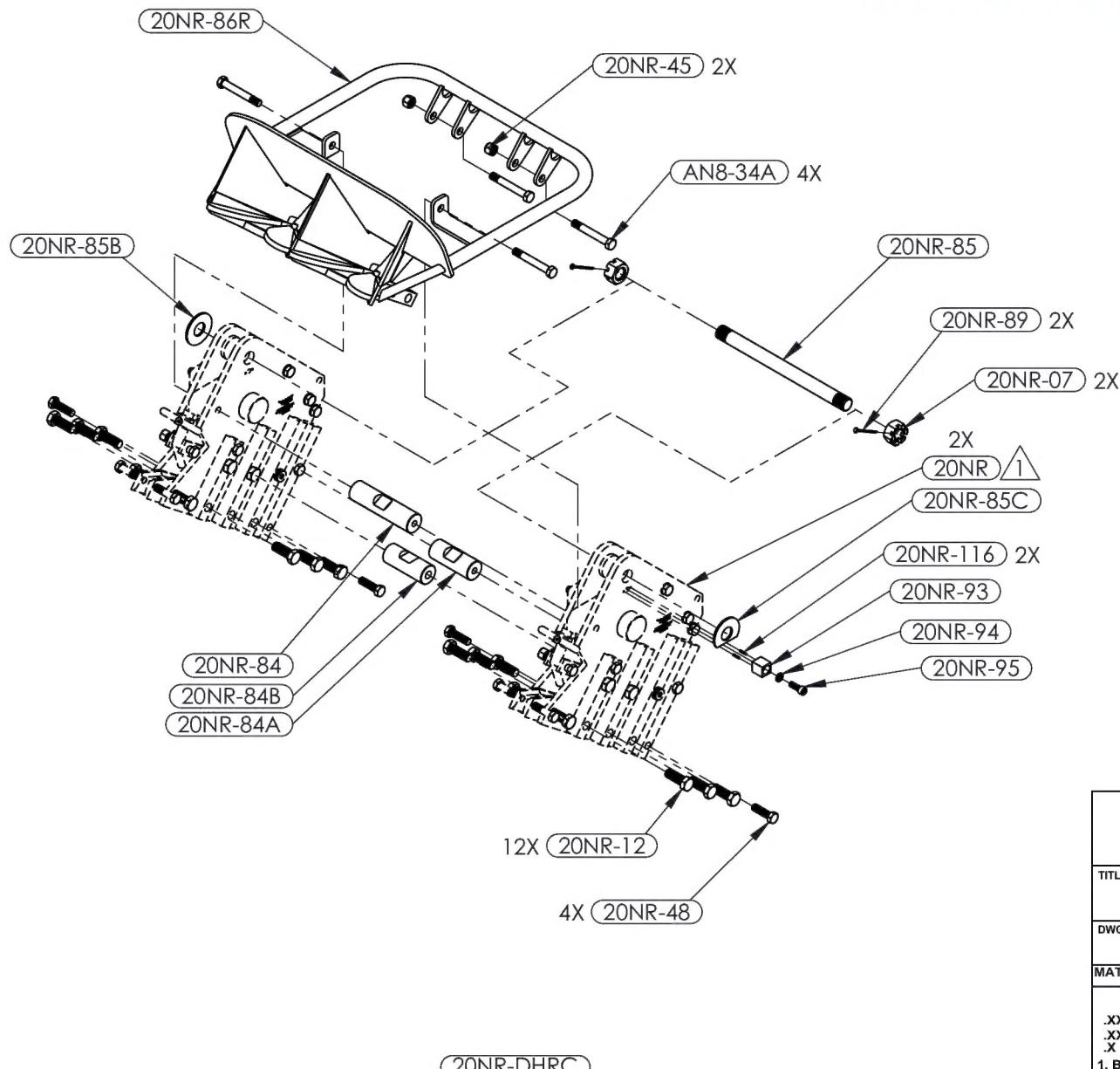
NOTE:
△ 20NR FOR REFERENCE ONLY.

	
TITLE	
DWG NO.	20NR-CAGES
MAT'L	DRAWN BY: SMITH
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .000 ± .005 FRACTIONS ± 1/8 .00 ± .01 ANGLES ± 5° .0 ± .1	APPROVED <i>D. Weil</i>
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	HEAT TREAT FINISH
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	SPEC
	USED ON MODEL
SCALE 1:12	DATE 8/16/2013
	SHEET 6 OF 8

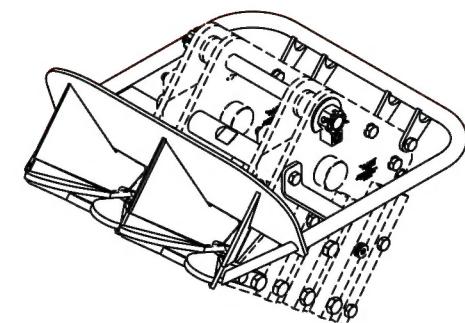
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REV			ECR			DESCRIPTION			DATE			INITIAL			APPROVED		
1			20NR CHANGED TO A REFERENCE, REMOVED T-BAR & SIDE PROTECTORS.						7/22/2014			JAG			EB		

SEE ATTACHED DEVIATION



D.H.C. RUBBERIZED



NOTE:

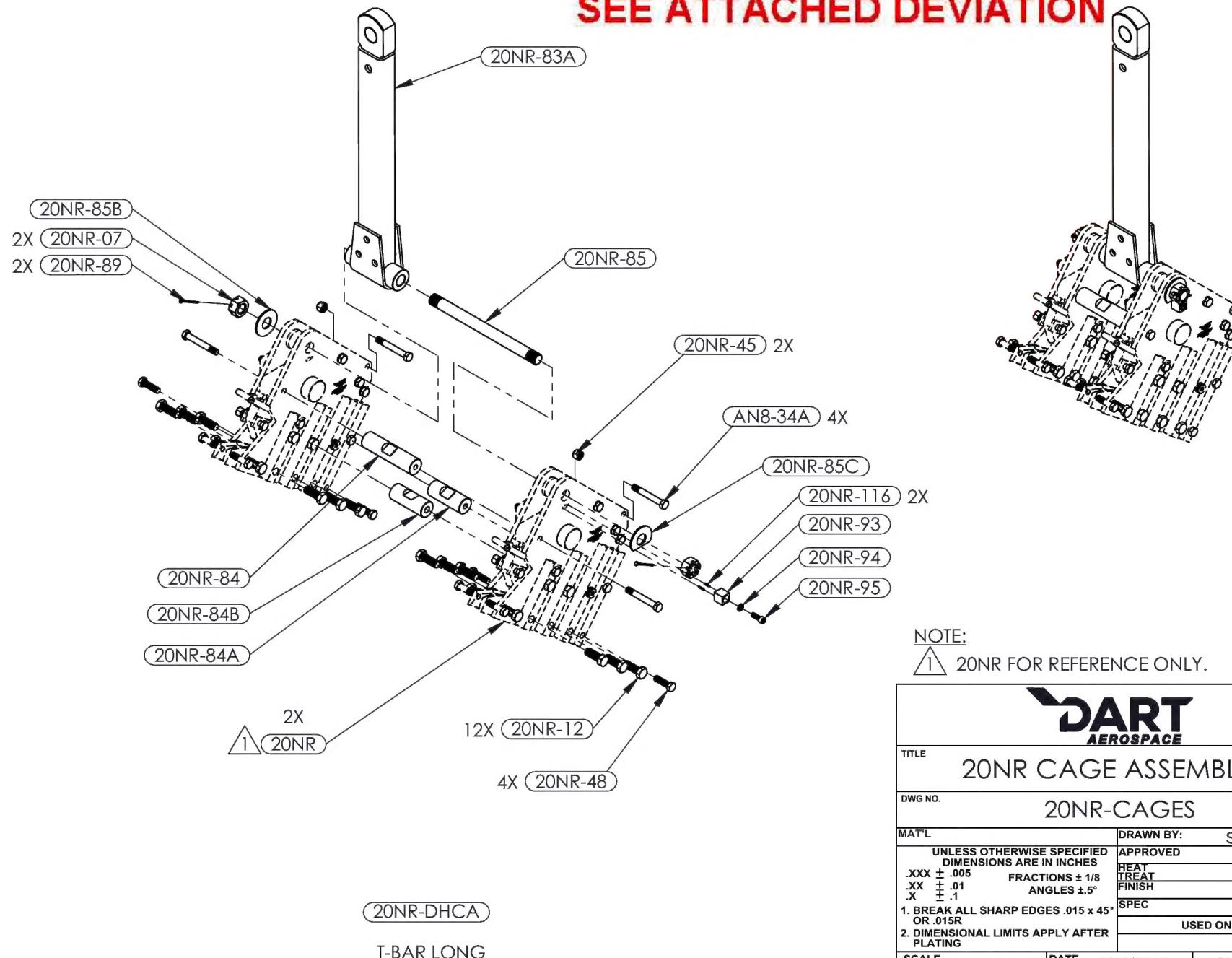
⚠ 20NR FOR REFERENCE ONLY.

DART AEROSPACE	
TITLE	
DWG NO.	20NR-CAGES
MAT'L	DRAWN BY: SMITH
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1	APPROVED <i>D. Weil</i>
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	HEAT TREAT FINISH
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	SPEC
	USED ON MODEL
SCALE 1:12	DATE 8/16/2013
	SHEET 7 OF 8

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REV			ECR			DESCRIPTION			DATE			INITIAL			APPROVED		
1			20NR CHANGED TO A REFERENCE.						7/22/2014			JAG			EB		

SEE ATTACHED DEVIATION



DART AEROSPACE	
20NR CAGE ASSEMBLIES	
DWG NO.	20NR-CAGES
MAT'L	DRAWN BY: SMITH
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>D Weil</i>
.XXX ± .005	FRACTIONS ± 1/8
.XX ± .01	ANGLES ± 5°
.X ± .1	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	SPEC
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL
SCALE 1:12	DATE 8/16/2013
SHEET 8 OF 8	

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No.

Route update only

Job: _____		DISPOSITION		DEPARTMENT/PROCESS			
Part No. <u>20NR - CAGES</u> <u>REV 2</u>		Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Cross tube <input type="checkbox"/>	Eng. (Non-AW) <input type="checkbox"/>	Engineering <input type="checkbox"/>
Part No. <u>20NR - CAGES</u> <u>REV 2</u>		Use-as-is <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Supplier <input type="checkbox"/>
Large Fab <input type="checkbox"/>		Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Quality <input type="checkbox"/>			
Date: <u>2019-05-31</u>	Sequence #:	QTY Affected:				MRB (QSI042) <u>WF</u>	
Description Work Order Deviation		Disposition					
<ul style="list-style-type: none"> -ITEM 20NR-12 MCHMASTER #92620A310 REPLACE BY MCHMASTER #92620A825 -ITEM 20 NR - 48 MCHMASTER #92620A747 REPLACE BY MCHMASTER #92620A748 -THE BOLTS MUST BE SHIMMED FLUSH WITH THE RAILS USING NAS1149FXXXX P WASHERS AS REQUIRED 		<p>THIS DEVIATION IS ACCEPTABLE TO USE AS IS</p> <p>FIT, FORM AND FUNCTION WILL BE AS ORIGINALLY INTENDED</p>					
		Completed By					
		Lead hand / Supervisor					
		QC / QA Coordinator					
Root Cause		FAULT CATEGORY					
Operator <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>	Contamination <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>			
Manufacturing Process <input type="checkbox"/>	Bending <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Tolerance <input type="checkbox"/>			
Equip/Tooling <input type="checkbox"/>	Crushing <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain Direction <input type="checkbox"/>	Drawing <input type="checkbox"/>			
Handling/Preservation <input type="checkbox"/>	Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Weld <input type="checkbox"/>	Finish <input type="checkbox"/>			
Material <input type="checkbox"/>	Crimp/Kink/Ripple/Wave/Twist <input type="checkbox"/>	Incomplete/Unclear Instructions <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>			
Product Improvement <input type="checkbox"/>	Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>	Misread <input type="checkbox"/>			
Process Improvement <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Off-set/Set-up <input type="checkbox"/>				
Human Factors <input type="checkbox"/>	Other/Details:						